

Amendments to and Listing of the Claims:

Please cancel claims 9-12 and 20-30, without prejudice, and please amend claim 31, without prejudice, as set forth below in the following listing of the claims:

1. to 30. (Canceled)

31. (Currently amended) A method of treating alopecia in a mammal comprising administering to the mammal an insulin sensitivity increasing substance (ISIS) in an amount effective to treat the alopecia in the mammal, in a manner so as to reach an affected area of a pilosebaceous apparatus, wherein the ISIS is a biguanide having a formula NH₂C(=NH)NHC(=NH)NH₂, an alkyl or aromatic derivative thereof, or a salt thereof.

32. (Previously presented) The method of claim 31, wherein treating alopecia comprises at least one of inhibiting, reducing and reversing the loss of hair in the mammal.

33. (Currently amended) The method of claim 31, wherein said the ISIS is administered topically to the affected site.

34. (Currently amended) The method of claim 31, wherein the ISIS is a biguanide having a formula NH₂C(=NH)NHC(=NH)NH₂ and its derivatives selected from the group consisting of monomethyl, dimethyl, trimethyl, tetramethyl and phenyl derivatives, and salts thereof.

35. (Previously presented) The method of claim 34, wherein the biguanide is metformin hydrochloride.

36. (Previously presented) The method of claim 31, wherein the ISIS is administered orally.

37. (Previously presented) The method of claim 31, wherein the mammal is a human.

38. (Previously presented) The method of claim 31, further comprising administering to the mammal a steroid enzyme inhibitor or inducer (STI) in an amount effective to inhibit or induce the activity of a steroid enzyme in the mammal.

39. (Previously presented) The method of claim 31, wherein the steroid enzyme inhibitor or inducer (STI) is selected from the group consisting of a 5-alpha reductase inhibitor

(ARI), a 3-alpha hydroxy steroid dehydrogenase inhibitor, and a 17-beta hydroxy steroid dehydrogenase inducer.

40. (Previously presented) The method of claim 31, further comprising administering to the mammal an androgen receptor blocking agent (ARB) in an amount effective to block androgen receptor activity in the mammal.

41. (Previously presented) The method of claim 31, wherein the androgen receptor blocking agent ARB is a compound selected from the group consisting of cyproterone acetate, flutamide, bicalutamide, nilutamide, RU-58841, canrenone, spironolactone, progesterone, 4MA, ketoconazole, and cimetidine.

42. (Previously presented) The method of claim 31, further comprising administering to the mammal both an androgen receptor blocking agent (ARB) in an amount effective to block androgen receptor activity, and a steroid enzyme inhibitor or inducer (STI) in an amount effective to inhibit or induce the activity of a steroid enzyme in the mammal.

43. (Previously presented) The method of claim 31, further comprising administering to the mammal an activity-enhancing agent where any ISIS alone or in combination with an androgen receptor blocking agent (ARB) or steroid enzyme inhibitor or inducer (STI) is to be administered topically, wherein the activity-enhancing agent is administered to the mammal in an amount effective to enhance the activity of either the ISIS alone or in combination with the androgen receptor blocking agent (ARB) and/or the steroid enzyme inhibitor or inducer (STI).

44. (Previously presented) The method of claim 43, wherein the activity-enhancing agent comprises at least one substance selected from the group consisting of a penetration-enhancing agent, a vasodilator compound, an anti-inflammatory agent, a glucose/insulin regulating compound, and an endogenous or exogenous effector.